

This is a civil action for damages sustained by RXi Pharmaceuticals Corporation (“RXi”) (“Plaintiff,” “RXi,” or the “Company”). RXi brings this Complaint for breach of contract, violation of fiduciary duties, and trade secret misappropriation against Anastasia Khvorova, Ph.D. (“Defendant” or “Dr. Khvorova”) and alleges as follows:

1. RXi brings this action against Defendant, the former Chief Scientific Officer of RXi, and later the Chief Scientific Officer and Senior Vice President of RCNS and RXi. RXi seeks specific performance, injunctive relief and damages to redress Defendant's breaches of three contracts and/or the implied covenant of good faith and fair dealing; her violation of fiduciary duties by usurpation of Company opportunities; her unfair competition; and her misappropriation of confidential and proprietary information and trade secrets by unauthorized disclosure.

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conditions, maladaptive genetic mutations, inflammatory diseases, metabolic disorders, macular degeneration, heart disease, and much more. Indeed, because the mechanism of action of RNAi is the destruction of ribonucleic acids (“RNA”) of particular, selected sequences, the possibilities are truly endless. Roughly two-dozen clinical trials have been initiated in the field over the last several years. RNAi may be not only the future of medicine, but also of agriculture, where it promises safe, highly specific pesticides, genetically improved or allergen-free foods, and more.

3. RXi is one of the world’s leaders in the pharmaceutical development of RNAi. At present, RXi has five active clinical trials for RNAi products, over a dozen patents for the manufacture or use of RNAi compositions, and several pending patent applications in the same field.

4. One of the earliest entrants in the pursuit of pharmaceutical RNAi, RXi has acquired tremendous expertise, institutional knowledge, and proprietary scientific data—at tremendous cost and effort. Like the other competitors in this nascent field, RXi has not yet acquired final approvals from the Food and Drug Administration, and thus, its business is dedicated substantially to research, development, and innovation.

5. The basic challenge to unlocking the vast potential of pharmaceutical RNAi is to achieve adequate, sustained medicinal concentrations in the tissue with the offending RNA. Tissue concentration depends fundamentally upon the proportion of RNAi that moves into the target tissue (*i.e.*, targeted absorption or delivery), as well as the rate at which the RNAi is destroyed or excreted from the body (*i.e.*, metabolism or half-life).

6. Through years of laboratory research, RXi has made profound contributions to the art on both fronts, as reflected in numerous patents (*e.g.*, U.S. Patent Nos. 10,041,073; 9,175,289; 9,303,259). While employing some of the field’s leading researchers, RXi pioneered a

groundbreaking self-delivering RNAi that also has exceptional half-life (“sd-rxRNA®”). The preferred structure of this sd-rxRNA® is partially reflected in, for example, U.S. Patent No. 8,796,443., attached hereto as Exhibit A (the “443 Patent”). The self-delivering feature of RXi’s sd-rxRNA® arises from, *inter alia*, (1) the particular lengths of the requisite RNA strands, (2) conjugation at a specialized point with a hydrophobic molecule, (3) strategic placement of phosphorothioate bonds near the ends of the RNA, and (4) extensive 2’ O-methyl modifications and 2’-fluoro modifications of the RNA. The last two of these features are substantially responsible as well for the significant increase in half-life when located strategically.

7. Beginning in 2008, RXi employed the Defendant as its Chief Scientific Officer. (See the “2008 Employment Agreement,” attached hereto as Exhibit B). Three additional contracts came into effect on September 24, 2011, whereby she was promoted to Senior Vice President and Chief Scientific Officer of RNCS, Inc.¹ (the “2011 Employment Contract,” attached hereto as Exhibit C), and simultaneously Defendant sold intellectual property to the Company (the “2011 Patent Assignments,” attached hereto as Exhibit D; *see also* the “Securities Purchase Agreement,” attached hereto as Exhibit E). Defendant reaped millions of dollars in cash, stock, annual cash payments, and stock options through these transactions.

8. Five months later, on February 24, 2012, having decided, but also having concealed, that she would leave the Company imminently, Dr. Khvorova commenced downloading all of the valuable, proprietary scientific data on the Company’s servers—in direct violation of, *inter alia*, each of the three contracts described above, the fiduciary duties arising from her role as a lead executive in the Company, and the trade secret law of the State of

¹ RNCS, Inc. was a wholly owned subsidiary of RXi; RXi is the successor in interest agreements involving RNCS, Inc.

Massachusetts (Mass. Gen. Laws Ann. ch. 93, § 42), as well as the Federal Defend Trade Secrets Act (18 U.S.C. 1836, *et seq.*).

9. Dr. Khvorova's efforts to misappropriate RXi's technology were detected by RXi. As a consequence of that detection, RXi and Dr. Khvorova separated, which separation was governed by a "Separation Agreement" that required her to assign "to the Company all right, title and interest in and to any patents, patent applications, inventions (whether or not patentable), works of authorship . . . , know-how, trade secrets, discoveries, or other intellectual property rights . . . derived from or relating to the possession or use . . . of any Company Materials." Under the Separation Agreement Dr. Khvorova acknowledged her continued obligations of confidentiality to RXi.

10. Mere months after separating from RXi, and once more obtaining, as part of her separation, significant compensation in the form of cash, stock, and stock options, Dr. Khvorova took up work with one of RXi's leading competitors, the University of Massachusetts Medical School ("UMass").

11. In 2013, immediately upon discovering Defendant's position with UMass, RXi provided notice to UMass of Defendant's continuing obligations of confidentiality to RXi. RXi provided such notice in hopes of avoiding the disclosure of RXi trade secrets to UMass and subsequent litigation. Other than to acknowledge receipt, UMass did not respond to RXi's correspondence, nor did UMass take any steps to ensure that Defendant abided by her duties of confidentiality to RXi.

12. Through a UMass publication dated December 1, 2015, RXi discovered that Dr. Khvorova did not appear to be honoring her obligations of confidentiality. Protective of its intellectual property, RXi continued to monitor publications originating from UMass, and, in 2016,

identified a U.S. patent application — U.S. 15/089423 (the “’423 Application”) — that demonstrated Defendant’s misappropriation and breach of her obligations of confidentiality. That patent application, which UMass improperly received by assignment from Dr. Khvorova, identified numerous features of RXi’s advanced, and non-public RNAi molecules that RXi had been developing during the Defendant’s employment.

13. After discovering the ’423 Application, RXi wrote to UMass and explained that the technology disclosed in the ’423 Application originated from, and belonged to, RXi. Despite this notice, and the notice received from RXi shortly after Dr. Khvorova joined UMass, UMass persisted in claiming ownership of the RNAi features disclosed in the ’423 Application and similar patent applications.

14. As evidenced by patent application and UMass publications, Defendant’s illicit disclosures included, *inter alia*, proprietary details on the effective asymmetric nucleotide lengths within the publicly disclosed range; the precise locations where 2’ O-methyl modifications, 2’ fluoro modifications, and phosphorothioate bonds that are effective; the particular ribonucleotide that should be present at the 5’ end of the antisense strand; and the 5’ phosphate modifications of said leading ribonucleotide that improve half-life without reducing efficacy. Further, she revealed to UMass RXi’s plans to pursue sd-rxRNA® with fully-modified, alternating 2’ O-methyl modifications and 2’ fluoro modifications.

15. Defendant went so far as to claim ownership of RXi’s inventions, the right to practice them freely, and the ability to transfer to UMass (a willing participant in the wrongful course of conduct) the very intellectual property rights that RXi acquired through years of scientific research and the expenditure of millions of dollars to Defendant and others. Thus, while still reaping the tremendous benefit of her transactions and relationship with RXi, the Defendant

intentionally and severely undermined the value of the consideration received by RXi, and through her unauthorized disclosure of RXi trade secret information caused damage to RXi.

THE PARTIES

16. RXi Pharmaceuticals Corporation is a Delaware Corporation having its principal place of business at 257 Simarano Drive, Suite 101, Marlborough, Massachusetts.

17. Defendant Anastasia Khvorova is an individual who currently resides in or near Westborough, Massachusetts. Dr. Khvorova was employed by RXi from October 17, 2008 to April 27, 2012. At the time Dr. Khvorova's employment was terminated, her position was that of Senior Vice President and Chief Scientific Officer of RXi. At all times during her employment, Dr. Khvorova was employed at 60 Prescott Street Worcester, Massachusetts. Defendant joined the University of Massachusetts Medical School as a professor and researcher on or about April 1, 2013. Defendant's business address is University of Massachusetts Medical School, 368 Plantation Street, Sherman Center, AS4. 1049, Worcester, Massachusetts.

JURISDICTION AND VENUE

18. This action arises under the Defend Trade Secrets Act of 2016 ("DTSA"), 18 U.S.C. § 1836, *et seq.*; Massachusetts common and statutory law respecting trade secrets, Mass. Gen. Laws Ann. ch. 93, §§ 42 to 42A; Massachusetts unfair competition law, Mass. Gen. Laws Ann. ch. 93A, § 11; and breach of contract under the laws of the Commonwealth of Massachusetts. This Court has subject matter jurisdiction over this action by virtue of 18 U.S.C. § 1836(b)–(c) and 28 U.S.C. § 1331, because RXi brings a claim against Defendant's violation of federal law pursuant to the DTSA. In regard to the state law claims, this Court has supplemental or pendant jurisdiction pursuant to 28 U.S.C. § 1367, because the claims are so closely related to RXi's claim for

misappropriation of trade secrets under the DTSA that they form part of the same case or controversy.

19. This Court has personal jurisdiction over the Defendant, who is a citizen of Massachusetts and resides in this District. In addition, the Defendant has had continuous and systematic business contacts with Massachusetts and in this District, through work performed at 368 Plantation Street, Sherman Center, AS4. 1049, Worcester, Massachusetts. Each of RXi's causes of action arises from the Defendant's activities in Massachusetts.

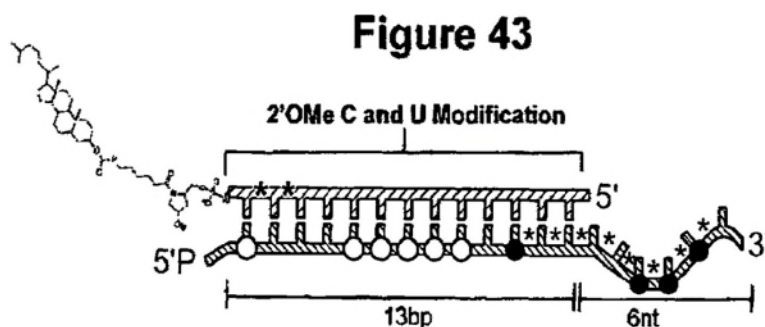
20. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391.

FACTUAL BACKGROUND

A. The sd-rxRNA® Platform

21. As described previously, the technologies at issue are chemically modified, asymmetric, double-stranded RNAi molecules, or sd-rxRNAi®. RXi has used, and continues to use, its patented sd-rxRNA® platform and trade secrets to develop its pharmaceutical products.

22. As set forth above, the sd-rxRNA® platform is described in part in RXi's '443 Patent. For example, Claim 9 of the '443 Patent requires at least: (1) a nucleic acid with a double stranded region of 8-15 nucleotides and a single stranded region of 4-12 nucleotides, (2) where the antisense or "guide" strand is 17-21 nucleotides in length and complementary to a target gene, and (3) the sense or "passenger" strand that is complementary to the antisense strand is 8-16 nucleotides in length, (4) wherein the single stranded region or "tail" is at the 3' end of the guide stand and is 4-12 nucleotides in length, (5) the tail having 2-12 phosphorothioate modifications, (6) wherein at least 40% of the nucleotides are modified, (7) the molecule is linked to a hydrophobic conjugate, and (8) it does not form a "hairpin" loop. See below Figure 43 from the '443 Patent.



23. RXi owns numerous patented variations on this platform covering particular compositions and applications. As illustrated above, at least three types of chemical modifications are included on such RNAi molecules: 2' O-methyl ("2'-OMe") modifications, 2'-fluoro (2'-F) modifications, and phosphorothioate modifications ("PS-bonds").

B. The Defendant's Employment and Contractual Obligations

24. Defendant began work for RXi as its Chief Scientific Officer on October 17, 2008, pursuant to the 2008 Employment Agreement. In regard to ownership of intellectual property, the agreement specifies that:

[A]ll inventions . . . and ideas related directly or indirectly to the business of the Company, . . . whether patentable or not, made or conceived by Employee or under Employee's direction during Employee's employment with the Company [belonged solely to the Company]. . . . Employee hereby assigns to the Company any rights Employee may have or acquire in all Intellectual Property and all related patents . . . and intellectual property rights and applications therefore, in the United States and elsewhere."

Exhibit B, Exhibit 1 §§ 1–2.

25. The 2008 Employment Agreement specifies further that:

[T]he services to be performed by Employee hereunder are special, unique, and extraordinary and that . . . Employee may acquire Confidential Information . . . the use or disclosure of which would cause the Company substantial loss and damage Accordingly, Employee agrees that Employee will not (directly or

indirectly) at any time, whether during or after Employee's employment with the Company

6.1. knowingly use for personal benefit or for any other reason not authorized by the Company any Confidential Information that Employee may acquire or has acquired by reason of Employee's employment with the Company; or

6.2. disclose any such Confidential Information to any person or entity except (A) in the performance of Employee obligations to the Company hereunder, (B) as required by a court of competent jurisdiction, (C) in connection with the enforcement of Employee rights under this Agreement, or (D) with the prior consent of the Board of Directors of the Company.

Exhibit B, Exhibit 1 §§ 6–6.2.

26. Under the 2008 Employment Agreement "Confidential Information":

"includes information with respect to the facilities and methods of the Company, reagents, chemical compounds, cell lines or subcellular constituents, organisms, or other biological materials, trade secrets, and other Intellectual Property, systems, patents and patent applications, procedures, manuals, confidential reports, financial information business plans, prospects, or opportunities, personnel information, or lists of customers and suppliers; provided, however, that Confidential Information shall not include any information that is known or becomes generally known or available publicly other than as a result of disclosure by Employee which is not permitted as described in clause [6.2] above"

Exhibit B, Exhibit 1, § 6.2.

27. In the 2008 Employment Agreement, Dr. Khvorova further agreed that all such "Confidential Information," and "All business records, papers, documents, and electronic materials kept or made by Employee relating to the business of the company which comprise Confidential Information shall be and remain the property of the Company during the Employee's employment and at all times thereafter." Elsewhere, the agreement reiterates that the protections accorded Confidential Information "shall survive termination of Employee's employment with the Company regardless of the manner of, and reason for, such termination" *Id.*

28. Subsequently, on September 24, 2011, the Defendant was employed as Vice President of RNCS, Inc., and Chief Scientific Officer, pursuant to the 2011 Employment Agreement. Exhibit C hereto. The 2011 Employment Agreement, like the previous agreement, defines “Intellectual Property” and requires disclosure and assignment to the Company of any Intellectual Property:

[All] inventions, discoveries, . . . concepts and ideas (whether or not patentable or copyrightable or constituting trade secrets) conceived . . . by the Executive . . . during the Executive’s employment and during the period of six (6) months immediately following termination of her employment that relate to either the Products or any prospective activity of the Company or any of its Affiliates or that make use of Confidential Information or any of the equipment or facilities of the Company or any of its Affiliates [belonged solely to the Company]. . . . The Executive shall promptly and fully disclose all Intellectual Property to the Company. The Executive hereby assigns and agrees to assign to the Company (or as otherwise directed by the Company) the Executive’s full right, title and interest in and to all Intellectual Property.

Exhibit C §§ 8, 13(c).

29. Under the 2011 Employment Agreement, the Defendant or “Executive”:

[A]cknowledge[d] that the Company and its Affiliates continually develop Confidential Information, that the Executive may develop Confidential Information for the Company or its Affiliates and that the Executive may learn of Confidential Information during the course of employment. The Executive will comply with the policies and procedures of the Company and its Affiliates for protecting Confidential Information and shall not disclose to any Person or use, other than as required by applicable law or for the proper performance of her duties and responsibilities to the Company and its Affiliates, any Confidential Information obtained by the Executive incident to her employment or other association with the Company or any of its Affiliates.”

Exhibit C § 7(a).

30. The “Confidential Information” contemplated by the 2011 Employment Agreement consists of:

“[A]ny and all information of the Company and its Affiliates that is not generally known by those with whom the Company or any of its Affiliates competes or does business, or with whom the Company or any of its Affiliates plans to compete or do business and any

and all information, publicly known in whole or in part or not, which, if disclosed by the Company or any of its Affiliates would assist in competition against them. Confidential Information includes without limitation such information relating to (i) the development, research, testing, manufacturing, marketing and financial activities of the Company and its Affiliates, (ii) the Products, (iii) the costs, sources of supply, financial performance and strategic plans of the Company and its Affiliates, (iv) the identity and special performance and strategic plans of the Company and its Affiliates and (v) the people and organizations with whom the Company and its Affiliates have business relationships and the nature and substance of those relationships. Confidential Information also includes any information that the Company or any Affiliates has received, or may receive hereafter, belonging to customers or others with any understanding, express or implied, that the information would not be disclosed.”

Exhibit C § 13(b).

31. The “Products” that are protected as Confidential Information under the 2011 Employment Agreement explicitly include, *inter alia*, “all products and product candidates planned, researched, developed, tested, [or] manufactured . . . during the Executive’s employment with the Company or any of its Affiliates.” *Id.*, § 13(e).

32. By its explicit terms, “this restriction shall continue to apply after her employment terminates, regardless of the reason for such termination,” except to “information which is generally known or readily available to the public at the time of disclosure . . . through no wrongful act on the part of the Executive or any other Person having an obligation of confidentiality to the Company or its Affiliates.” *Id.*, at § 7.

33. Moreover, the 2011 Employment Agreement explicitly maintained the Defendant’s prior “obligations owed to the Company or its predecessor with respect to confidentiality, non-competition, intellectual property, and proprietary information, all of which shall continue in force.” *Id.*, at § 19.

34. Concurrently with the execution of the 2011 Employment Agreement, the Defendant assigned to RXi certain intellectual property developed by Anastasia Khvorova, Ph.D. through work at and ownership of Advirna, a third party entity in which Dr. Khvorova held a 50%

stake. Exhibit D (2011 Patent Assignments), § 2.7. That intellectual property included certain patent applications (*see* Exhibit E, Appendix 1) and any and all related patent and technology rights, such as “technical information, know-how, process, procedure, composition, method, formula, protocol, trade secrets, technique or data.” In exchange for this intellectual property, Defendant received cash, stock, stock options, and future cash payments, which, at the time, were valued in the millions of dollars.

35. The 2011 Patent Assignments specified that the Defendant remained “subject to . . . confidentiality provisions of employment agreements entered into by [her].” *Id.*, at § 9.2.

C. The Defendant’s Secret Mass Download and Separation from RXi

36. Soon after executing the 2011 Employment Agreement and the 2011 Patent Assignments, the Defendant determined to leave RXi.

37. Less than two months after executing the 2011 Employment Agreement, on November 8, 2011, Dr. Khvorova emailed RXi confidential information to her personal email account. The converted documents included Trade Secret Information detailing the step-by-step methodology employed by RXi for the developmental testing of RNAi.

38. Within five months after the execution of the 2011 Patent Assignments and Employment Agreement, on or about February 24 to 26, 2012, Dr. Khvorova engaged in a mass downloading of Company data and experimental findings (the “Secret Mass Download”). The Secret Mass Download was so massive that it triggered alarms within RXi, which resulted in RXi investigating the downloads and discovering Dr. Khvorova’s attempted misappropriation.

39. In response to Dr. Khvorova’s Secret Mass Download, the parties executed the 2012 Separation Agreement, whereby the Defendant assigned “to the Company all right, title and interest in and to any patents, patent applications, inventions (whether or not patentable), works of

authorship . . . , know-how, trade secrets, discoveries, or other intellectual property rights . . . derived from or relating to the possession or use . . . of any Company Materials.”

40. Pursuant to the 2012 Separation Agreement, “Dr. Khvorova acknowledge[d] her surviving obligations to the Company as set forth in: (1) the [2011] Employment Agreement, and (ii) the [2008 Employment] Agreement” § 3(a). In addition, she again covenanted “that, other than as required by law, she will never disclose any confidential information whatsoever concerning her employment by the Company” The release of claims in the 2012 Separation Agreement further highlighted Dr. Khvorova’s continuing duties of confidentiality to the Company: “Excluded from the scope of this release of claims are any causes of action, rights and claims, arising under this Agreement after its effective date, and claims arising from past fraudulent or criminal conduct by Dr. Khvorova to the extent such conduct is unknown to the releasing party as of the date th[e 2012 Separation Agreement] is executed.”

41. Thus, under each of the 2008 Employment Agreement, the 2011 Employment Agreement, the 2011 Patent Assignment, and the 2012 Separation Agreement, the Defendant was obligated—beyond termination of her employment with RXi—to refrain from any disclosure of non-public or Trade Secret Information as set forth above (the Defendant’s “Continuing Confidentiality Obligations”).

42. In addition, and as set forth above, under each of the 2008 Employment Agreement, the 2011 Employment Agreement, the 2011 Patent Assignment, and the 2012 Separation Agreement, the Defendant covenanted to, and presently did assign all patent and intellectual property rights to RXi relating to her work with RXi. In addition, the Defendant covenanted to undertake all reasonable actions necessary to secure for RXi all such assigned technology (the Defendant’s “Continuing Assignment Obligations”).

43. To further protect against misappropriation or the undermining of intellectual property rights conveyed to or developed at RXi relating to the sd-rxRNA® platform, in the 2011 Securities Purchase Agreement, as a co-owner and Affiliate of Advirna, the Defendant “covenant[ed] and agree[d] that for a period of five (5) years following [the effective date of the Securities Purchase Agreement], [she] will not, directly or indirectly . . . engage in activities relating to the development or commercialization of human therapeutic or diagnostic products or technologies,” (the Defendant’s “Noncompetition Obligations”).

D. The Defendant’s Misappropriation and Breaches of Contract

44. The Defendant has disclosed and continues to disclose confidential trade secret information to UMass in violation of each of the above-mentioned agreements and the Continuing Confidentiality Obligations therein.

45. Moreover, the Defendant has, in violation of the commitments made in the contracts identified above, transferred and assigned to UMass intellectual property that was developed, pursued, envisaged, and/or conceived at RXi during the time of her employ, and thus, were automatically assigned to RXi pursuant to the above described contracts. By transferring such intellectual property rights to UMass, and refusing to submit to requests from RXi for execution of reasonable documentation to secure unto RXi these intellectual property rights, the Defendant has breached her Continuing Assignment Obligations as set forth in each of the above described contracts.

46. In particular, through decades of independent research and millions of dollars of investment on the platform, and during the time of the Defendant’s employment at RXi, RXi acquired sophisticated knowledge of particular favorable sequences, patterns, and variations for compositions of chemically modified sd-rxRNA®. For instance, during the time that the

Defendant was employed by RXi, the Company discovered, but did not publicly disclose, therapeutic molecules with advantageous and unique nucleic acid modifications that improved the useful characteristics of those molecules, such as their stability and/or therapeutic properties.

47. These discoveries, and Defendant's knowledge thereof, is demonstrated by experimental data on such sd-rxRNA® molecules that was obtained through research conducted under Defendant's supervision. Defendant's knowledge is further established by internal presentations, updates to the board of directors, subordinate performance evaluations, and by the Defendant's own emails.

48. After leaving RXi, on or before April 22, 2013, Dr. Khvorova began work for one of its competitors in the field of pharmaceutical RNAi research, the University of Massachusetts Medical School.

49. Dr. Khvorova's beginning work for UMass in 2013 on matters relating to human therapeutic or diagnostic RNAi technology, constitutes a breach of her Noncompetition Obligations.

50. Further, the above cited contractual provisions clearly prohibit Dr. Khvorova from disclosing any confidential information acquired through her work at RXi. Under the circumstances, Dr. Khvorova's taking up work for a research institution competitive with RXi immediately after termination from RXi, raised the possibility that she may intend to disclose Confidential Information in violation of her agreements with RXi.

51. To avoid such eventualities, RXi delivered a notice to UMass on April 22, 2013, notifying UMass of Dr. Khvorova's obligations regarding confidentiality. RXi hoped that UMass would avoid any conflict by ensuring Dr. Khvorova's adherence to her Continuing Confidentiality Obligations and Continuing Assignment Obligations. Other than to confirm receipt of this letter,

UMass did not respond to RXi's letter, nor has it required Dr. Khvorova to abide by her obligations to RXi, despite having received additional information regarding Dr. Khvorova's obligations, including a copy of the 2012 Separation Agreement.

52. In December 2015, Dr. Khvorova's laboratory released an article titled "Hydrophobically Modified siRNAs Silence Huntington mRNA in Primary Neurons and Mouse Brain." The article described the utility of an RNAi molecule referred to as HTT10150 in targeting Huntington-related RNA; as described, HTT10150 was strikingly similar to sd-rxRNA®, which was studied by RXi for the same potential application while Dr. Khvorova was employed by RXi.

53. On November 3, 2016, the '423 patent application publication was released which identified the Defendant as the first named inventor of a class of RNAi molecules possessing the same non-public experimental features of sd-rxRNA® identified above. These features represented the leading edge of investigation at RXi during Dr. Khvorova's tenure with RXi. The '423 patent application establishes Dr. Khvorova's breach of the Continuing Confidentiality and Assignment Obligations.

54. Upon identifying the '423 patent application publications, RXi again contacted UMass in multiple letters, describing the extent of misappropriation manifested in the patent application and others like it, and the assignment to RXi by Dr. Khvorova of the RNAi features disclosed therein. UMass failed to take any action to cease the ongoing misappropriation of trade secrets and wrongful attempted transfer of intellectual property rights, but instead persisted in taking advantage of the Defendant's wrongful conduct and usurping the value of RXi's inventions for itself.

55. RXi also wrote to Dr. Khvorova, reminding her of her Continuing Confidentiality Obligations and Continuing Assignment Obligations and asking that she honor those obligations.

Nonetheless, the Defendant persisted in disclosing to UMass the trade secrets and intellectual property of RXi and has, in violation of the 2012 Separation Agreement assisted UMass in claiming ownership of patent rights included within “Company Materials.” Through Dr. Khvorova’s disclosure, UMass has claimed ownership of RXi’s technology.

56. At all times up to the filing of this Complaint, the Defendant has failed to take steps to ensure that RXi technology is not disclosed to UMass, and she has failed to take steps to ameliorate her improper disclosure by correcting her improper claiming as her own invention, and subsequent assignment to UMass, technology belonging to RXi. The Defendant’s breaches of the Continuing Confidentiality Obligations, and Continuing Assignment Obligations, and her misappropriation of trade secrets, is still ongoing.

CAUSES OF ACTION

Count I

Misappropriation of Trade Secrets Under the Defend Trade Secrets Act of 2016

57. RXi realleges and incorporates by reference each of the preceding paragraphs as if fully alleged herein.

58. By virtue of her employment and responsibilities, the Defendant was given access to trade secrets and other confidential and proprietary information (“Trade Secret Information”)—information that is valuable to RXi’s business and gives RXi an advantage over competitors.

59. The Trade Secret Information obtained by the Defendant relates to RXi’s business and services that are maintained and provided in interstate commerce.

60. The Trade Secret Information obtained by the Defendant is a “trade secret” within the meaning of 18 U.S.C. § 1839(3), because, *inter alia*, it is valuable as a result of not being generally known as set forth above, and RXi takes and has taken reasonable measures to secure

the information in secret by its course of contracting, supervising, instructing, and monitoring its personnel.

61. The Defendant had and has a continuing duty to maintain confidentiality of trade secrets and other confidential and proprietary information, as well as a continuing duty not to use, exploit, or divulge such information other than in connection with the performance of her duties for RXi, for the benefit of RXi and pursuant to authorization by RXi.

62. The Defendant has maliciously and willfully misappropriated RXi's trade secrets through the Secret Mass Download and otherwise. The Defendant deliberately elected and maintained a course of conduct, beginning only weeks after her execution of several agreements in 2011 and acquisition of millions of dollars in present and future value from RXi as set forth above, whereby RXi's mastery of and advancements in the sd-rxRNA® platform, as well as its methodology for analysis of RNAi efficacy, were and are presently being conveyed to UMass, a direct competitor.

63. RXi has demanded the return of its property and trade secret and confidential information, and otherwise the ceasing of all unauthorized disclosure of Trade Secret Information, but the Defendant has failed and refused to comply without any justification.

64. Notwithstanding RXi's repeated demands for cessation of disclosure of trade secrets, the Defendant still persists in such disclosures, including subsequent to the effective date of the Defend Trade Secrets Act of 2016 (18 U.S.C. § 1836, *et seq.*).

65. As a result of the Defendant's misappropriation of RXi's Trade Secret Information, the Defendant has and continues to violate the Defend Trade Secrets Act of 2016 (18 U.S.C. § 1836(b)(1)).

66. As a direct and proximate result of the Defendant's violation of the Defend Trade Secrets Act of 2016, RXi has suffered and will continue to suffer substantial direct and consequential damages in an amount to be established at trial.

67. The Defendant's actions in converting and misappropriating RXi's Trade Secrets was willful, wanton, and malicious for all of the reasons described above.

68. As a direct and proximate result of the Defendant's wrongful conduct, RXi has suffered and will continue to suffer irreparable harm that cannot be adequately redressed at law.

69. The Defendant's actions have caused and will continue to cause RXi irreparable harm if not permanently enjoined.

Count II

Misappropriation of Trade Secrets Under the Massachusetts Trade Secrets Act

70. RXi realleges and incorporates by reference each of the preceding paragraphs as if fully alleged herein.

71. By virtue of her employment and responsibilities, the Defendant was given access to trade secrets and other confidential and proprietary information ("Trade Secret Information")—information that is valuable to RXi's business and gives RXi an advantage over competitors.

72. RXi takes and has taken reasonable steps to preserve the secrecy of its confidential and proprietary information and trade secrets, including by its course of contracting, supervising, instructing, and monitoring its personnel to guard against disclosure. RXi derives independent economic value from the fact that the information is not generally known to the public or to RXi's competitors.

73. The Defendant had and has a continuing duty to maintain confidentiality of trade secrets and other confidential and proprietary information, as well as a continuing duty not to use,

exploit, or divulge such information other than in connection with the performance of her duties for RXi, for the benefit of RXi and pursuant to authorization by RXi.

74. The Defendant has maliciously and willfully misappropriated RXi's trade secrets through the Secret Mass Download and otherwise. The Defendant deliberately elected and maintained a course of conduct, beginning only weeks after her execution of several agreements in 2011 and acquisition of millions of dollars in present and future value from RXi as set forth above, whereby RXi's mastery of and advancements in the sd-rxRNA® platform, as well as its methodology for analysis of RNAi efficacy, were and are presently being conveyed to UMass, a direct competitor.

75. Pursuant to Massachusetts law RXi states as follows: The conduct described herein establishes that the Defendant misappropriated, disclosed, misused, took, carried away, transferred, copied, concealed, exploited, and/or otherwise used RXi's Trade Secret Information to benefit herself and/or UMass, to the detriment of RXi.

76. Additionally and alternatively, the Defendant wrongfully took RXi's Trade Secret Information and intended to convert those trade secrets to her own use and her own benefit.

77. RXi has demanded the return of its property and trade secret and confidential information, and otherwise the ceasing of all unauthorized disclosure of Trade Secret Information, but the Defendant has failed and refused to comply without any justification.

78. Notwithstanding RXi's repeated demands for cessation of disclosure of trade secrets, the Defendant still persists in such disclosures.

79. As a direct and proximate result of the Defendant's violation of Massachusetts Trade Secret Act, RXi has suffered and will continue to suffer substantial direct and consequential damages in an amount to be established at trial.

80. The Defendant's conduct in converting and misappropriating RXi's Trade Secrets was willful, wanton, and malicious for all of the reasons described above.

81. As a direct and proximate result of the Defendant's wrongful conduct, RXi has suffered and will continue to suffer irreparable harm that cannot be adequately redressed at law.

82. The Defendant's actions have caused and will continue to cause RXi irreparable harm if not permanently enjoined.

Count III

Misappropriation of Trade Secrets Under Massachusetts General Law Ch. 93, § 42 and § 42A

83. RXi realleges and incorporates by reference each of the preceding paragraphs as if fully alleged herein.

84. RXi has secret information, tangible or intangible, which it stores securely and confidentially, that constitutes, represents, evidences or records a secret scientific, technical, merchandising, production or management information, design, process, procedure, formula, invention or improvement.

85. This secret information is used in RXi's business, is valuable to RXi, and provides RXi with an advantage over competitors.

86. RXi takes and has taken reasonable steps to preserve the secrecy of its confidential and proprietary information and trade secrets, including by its course of contracting, supervising, instructing, and monitoring its personnel to guard against disclosure. RXi derives independent economic value from the fact that the information is not generally known to the public or to RXi's competitors.

87. The Defendant stole, unlawfully took, carried away, concealed, copied, or otherwise used this information from RXi, with the intent to convert the information to her own

use. The Defendant's conduct in this regard was willful, wanton, and malicious for all of the reasons described above.

88. As a result, the Defendant has violated and continues to violate the Massachusetts Trade Secrets Act, Massachusetts General Laws chapter 93, § 42 and § 42A.

89. As a direct and proximate result of the Defendant's violation of the Massachusetts Trade Secrets Act, Massachusetts General Laws chapter 93, § 42 and § 42A, RXi has suffered and will continue to suffer substantial direct and consequential damages in an amount to be established at trial.

90. As a direct and proximate result of the Defendant's wrongful conduct, RXi has suffered and will continue to suffer irreparable harm that cannot be adequately redressed at law.

91. The Defendant's actions have caused and will continue to cause RXi irreparable harm if not permanently enjoined.

Count IV

Breach of Fiduciary Duties Under Massachusetts Common Law

92. RXi realleges and incorporates by reference each of the preceding paragraphs as if fully alleged herein.

93. By virtue of her employment and responsibilities, the Defendant was given access to trade secrets and other confidential and proprietary information ("Trade Secret Information")—information that is applied in RXi's business to give it an advantage over competitors.

94. The Defendant occupied executive-level positions at RXi.

95. The Defendant, therefore, owed RXi a duty of loyalty.

96. The Defendant promoted her own interests and/or UMass's interests in a manner injurious to RXi. While she was still employed at RXi, the Defendant copied and took RXi's

confidential, proprietary, and/or Trade Secret Information, without RXi's knowledge or approval, including, but not limited to, the Secret Mass Download.

97. The Defendant, therefore, violated her duty of loyalty to RXi.

98. As a direct and proximate result of the Defendant's violation of the duty of loyalty, RXi has suffered and will continue to suffer substantial direct and consequential damages in an amount to be established at trial.

99. As a direct and proximate result of the Defendant's wrongful conduct, RXi has suffered and will continue to suffer irreparable harm that cannot be adequately redressed at law.

100. The Defendant's actions have caused and will continue to cause RXi irreparable harm if not permanently enjoined.

Count V

Breach of Contract

101. RXi realleges and incorporates by reference each of the preceding paragraphs as if fully alleged herein.

102. Each of the above described contracts between the Defendant and RXi is valid and enforceable insofar as relates to the Defendant's Continuing Confidentiality Obligations, Continuing Assignment Obligations, and Noncompetition Obligations. The agreements are supported by consideration.

103. Each of the Defendant's Continuing Confidentiality Obligations, Continuing Assignment Obligations, and Noncompetition Obligations in the above described agreements is necessary to protect the legitimate business interests of RXi. These obligations are reasonably limited in time and space, and are consistent with the public interest.

104. The Defendant breached the above described agreements by copying and collecting RXi confidential, proprietary, and/or Trade Secret Information with unauthorized intent to disclose to third parties or otherwise; by failing to return RXi confidential, proprietary, and/or Trade Secret Information upon termination of employment; by divulging confidential information to unauthorized persons and/or using such information for unauthorized purposes; by beginning work on human therapeutic and diagnostic RNAi during the prohibited period; by representing to third parties that she had the right and ability to transfer or assign intellectual property relating to or described in RXi's confidential, proprietary, and/or Trade Secret Information, or otherwise developed or conceived at RXi; by attempting to transfer or assign to third parties intellectual property relating to, embodied by, or described in RXi's confidential, proprietary, and/or Trade Secret Information; by failing to execute reasonable documentation in support of RXi's efforts to secure and/or maintain intellectual property relating to or described in RXi's confidential, proprietary, and/or Trade Secret Information, or otherwise developed or conceived at RXi.

105. As a direct and proximate result of the Defendant's breaches of contract, RXi has suffered and will continue to suffer substantial direct and consequential damages in an amount to be established at trial.

106. As a direct and proximate result of the Defendant's wrongful conduct, RXi has suffered and will continue to suffer irreparable harm that cannot be adequately redressed at law.

107. The Defendant's actions have caused and will continue to cause RXi irreparable harm if not permanently enjoined.

Count VI

Unfair Competition Under Massachusetts General Law Ch. 93A, §11

108. RXi realleges and incorporates by reference each of the preceding paragraphs as if fully alleged herein.

109. RXi engages in the conduct of trade or commerce.

110. The Defendant also engages in trade or commerce. As the co-owner and proprietor of Advirna, the Defendant is a competitor with RXi in the marketplace. Additionally, the Defendant was an officer at RXi and is now a principal at UMass.

111. Through her misappropriation of RXi's confidential, proprietary, and/or Trade Secret Information, the Defendant has used or employed an unfair method of competition and/or an unfair or deceptive act or practice.

112. As a direct and proximate result of the Defendant's misappropriation of RXi's confidential, proprietary, and/or Trade Secret Information and Defendant's breaches of contract, RXi has suffered and will continue to suffer substantial direct and consequential damages in an amount to be established at trial.

113. The Defendant's wrongful conduct as set forth above affects and harms the open marketplace.

114. As a direct and proximate result of the Defendant's wrongful conduct, RXi has suffered and will continue to suffer irreparable harm that cannot be adequately redressed at law.

115. The Defendant's actions have caused and will continue to cause RXi irreparable harm if not permanently enjoined.

REQUESTED RELIEF

For the reasons set forth above, RXi respectfully requests the following relief:

1. Order Defendant to deliver RXi's documents and all other tangible RXi Trade Secret Information in her and/or her attorney's possession, custody, and control to the undersigned counsel, together with a signed representation that she or her attorney did not alter, destroy, remove, copy, or retain any document, file, or information;
2. Order Defendant to renounce her assignment to UMass or any party other than RXi associated with U.S. patent application 5/089423, any related applications, or any other applications as well as issued patents that include RXi trade secret and confidential information.
3. Enter judgment in favor of RXi and against the Defendant on all counts of the Complaint;
4. Enter an Order granting a permanent injunction against any further disclosure of RXi confidential, proprietary, or Trade Secret Information to any third party.
5. Award compensatory damages, calculated at the time of filing to be significantly in excess of \$75,000.
6. Award consequential damages in an amount to be proven at trial;
7. Award punitive, double, and treble damages as appropriate to account for willful and malicious misconduct, breach of the duty of loyalty, and pursuant to Mass. Gen. Laws. ch. 93, §§ 42, 42A, as well as Mass. Gen. Laws ch. 93A, § 11.
8. Award RXi its reasonable and necessary attorneys' fees and costs of suit, and;
9. Award RXi any such other and further relief as the Court may deem just and proper.

JURY DEMAND

RXi demands a trial by jury on all issues in this action.

Dated: October 19, 2018

Respectfully submitted,

RXI PHARMACEUTICALS CORPORATION

By its attorneys,

/s/ Jason C. Kravitz

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